

Proposed Amendments to the Claims:

Please cancel claims 7 and 16, without prejudice or disclaimer.

Claims 1, 2, 4, 5 and 6, 8-11, 15, 17 and 18 are proposed to be amended herein. Claim 3 was earlier canceled. Please note that, upon entry of the amendment, all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A system for applying a modifying composition to a non-equidimensional substrate, comprising:
a processing chamber configured for passing the an elongated non-equidimensional substrate therethrough, the processing chamber being further configured to accept a treatment mixture into the chamber thereinto during movement of the non-equidimensional elongated substrate through the processing chamber therethrough, where the treatment mixture comprises the a modifying agent composition in a carrier medium selected from the group consisting of a supercritical fluid, a near-critical fluid, a superheated fluid, a superheated liquid, and a liquefied gas, the processing chamber being configured to initiate a pressure drop in the treatment mixture such that the modifying agent composition is released from the carrier medium and applied to the non-equidimensional elongated substrate upon contact between the treatment mixture and the non-equidimensional substratewithin the processing chamber; and
an adjustable entry seal in communication with the processing chamber, the adjustable entry seal comprising at least one baffle having a non-equidimensional aperture of non-linear and non-rectangular shape therethrough adjustable to various sizes to accept various non-equidimensional substrates for modification and comprising an opening an elongated substrate of substantially matching, but slightly larger, a cross-section of a non-equidimensional substrate and an entry seal chamber containing a seal gas such that any fluids within the system are unable to leak into an atmosphere surrounding the system.

2. (Currently Amended) The system of claim 1, wherein the processing chamber comprises
a first region,
a second region, and
a constricted medial region between the first region and the second region, ~~wherein and, in combination therewith, configured to initiate the modifying agent is separated from the carrier medium upon a pressure drop when the treatment mixture is introduced into the constricted medial region, such that the modifying agent is applied to the non-equidimensional substrate.~~

3. (Canceled).

4. (Currently Amended) The system of claim 1, further comprising an exit seal ~~comprising at least one baffle having a non-equidimensional aperture of non-linear and non-rectangular shape therethrough to accept the elongated substrate of substantially matching, but slightly larger, cross-section that matches and is slightly larger than a cross-section of the non-equidimensional substrate.~~

5. (Currently Amended) The system of claim 1, wherein the processing chamber ~~aperture of the at least one baffle configured for passing the non-equidimensional substrate therethrough comprises a processing chamber is configured for passing therethrough a non-equidimensional substrate selected from the group consisting of sheet-like substrates, U-shaped substrates, corrugated substrates, irregularly shaped substrates and angled substrates.~~

6. (Currently Amended) The system of claim 5, wherein the ~~aperture of the at least one baffle processing chamber configured for passing therethrough a non-equidimensional substrate comprises a processing chamber is configured for passing therethrough a sheet-like substrate selected from the group consisting of a plate, a ribbon, a sheet, a screen, and a plied material.~~

7. (Canceled).

8. (Currently Amended) The system of claim 4, further comprising at least one expansion chamber disposed between the ~~adjustable~~-entry seal and the processing chamber, and

at least one expansion chamber disposed between the exit seal and the processing chamber.

9. (Currently Amended) The system of claim 8, wherein the ~~adjustable~~-entry seal and the exit seal comprise fluid filled chambers configured to maintain a pressure that is at least slightly greater than pressures in the adjacent-expansion chambers.

10. (Currently Amended) The system of claim 9, wherein the ~~adjustable~~-entry seal and the exit seal are each configured to maintain a chamber pressure that is at least slightly greater than the adjacent expansion chambers by continuous inflow of a ~~gas~~ fluid.

11. (Currently Amended) The system of claim 10, wherein the ~~adjustable~~-entry seal and the exit seal are each configured to maintain a chamber pressure that is at least slightly greater than pressures in the adjacent expansion chambers by continuous inflow of a ~~gas~~ fluid that is inert with respect to the treatment mixture.

12. (Previously presented) The system of claim 1, further comprising a pressure regulator configured for controlling pressure in the processing chamber.

13. (Previously presented) The system of claim 1, further comprising a temperature regulator configured for controlling temperature in the processing chamber.

14. (Previously presented) The system of claim 1, further comprising a substrate feed controller configured for controlling a speed at which the non-equidimensional substrate is passed through the system.

15. (Currently Amended) The system of claim 4, wherein the at least one baffle of each of the entry seal and the exit seal is adjustable to at least one of a various sizes~~different size~~

~~and a different shape for accepting various non-equidimensional different elongates substrates for modification therethrough.~~

16. (Cancelled).

17. (Currently Amended) The system of claim 1, wherein the processing chamber configured for passing the non-equidimensional substrate therethrough at least one baffle comprises a processing chamber ~~an aperture~~ configured for passing multiple, elongated, equidimensional substrates therethrough simultaneously when arranged in an adjacent manner so as to present a non-equidimensional, non-linear, non-rectangular cross-section cross-sectional footprint in a direction co-linear to the system.

18. (Currently Amended) The system of claim 17, wherein the processing chamber configured for passing multiple substrates therethrough simultaneously when arranged in an adjacent manner so as to present a non-equidimensional cross-sectional footprint in a direction co-linear to the system ~~at least one baffle~~ comprises a processing chamber ~~an aperture~~ configured for passing multiple, elongated, equidimensional substrates therethrough simultaneously when arranged in a side-by-side manner, a top-to-bottom manner, or encircled about each other.